OPTIMIZATION OF ANNEALING TEMPERATURE FROM LOCAL *Chromolaena odorata*

NUR HIDAYAH MD YAZID

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This Final Year Project Report entitled **"Optimization of Annealing Temperature from Local *Chromolaena odorata*"** was submitted by Nur Hidayah binti Md Yazid, in partial fulfillment of the requirements for the Degree of Bachelor of Science (Hons.) Biology, in the Faculty of Applied Sciences, and was approved by

_____

Suwaibah binti Mohamed
Supervisor
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

_____

Sarini binti Ahmad Wakid
Project Coordinator
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

_____

Dr. Nor' Aishah binti Abu Shah
Head of Pure Science School
Faculty of Applied Sciences
Universiti Teknologi MARA
72000 Kuala Pilah
Negeri Sembilan

Date: _____

TABLE OF CONTENTS

ABSTRACT

OPTIMIZATION OF ANNEALING TEMPERATURE FROM LOCAL *Chromolaena odorata*

Chromolaena odorata belongs to the Asteraceae family which was originally came from Central and South America. In this study the efficiency of a modified CTAB method for DNA extraction from local *C. odorata* leaves were determined based on their DNA concentration, DNA yield, DNA band and purity. The optimum PCR annealing temperature of local C. *odorata* was identified by using ITS1 and ITS4 primer amplification. More clear and intact DNA band was produced from extraction using modified CTAB method. The values obtained from the CTAB extraction method for DNA purity, DNA concentration and DNA yield were 1.65±0.06, 101.6±7.638 ng/ µL and 152.5±11.456 ng/mL respectively. The values obtained from the modified CTAB method for DNA purity, DNA concentration and DNA yield were 1.82±0.03, 118.3±7.638 ng/ µL and 177.5±11.456 ng/mL respectively. Modified CTAB extraction method are much more preferable to isolate DNA from local C. *odorata* due to the presence of reagents such as phenol, polyvinylpyrrolidone, B-mercaptoethanol and also extended treatment of RNase. This study showed that the exact annealing temperature for the isolated DNA from *C.odorata* with ITS 1 and ITS4 amplification were 65°C and 63°C respectively. Both PCR products obtained were in the range of 250 to 300 base pair in size, which indicates that the amplicon size referred to the primer characteristics.